REMARKS

Claims 1-5 and 7-21 are pending in the present application. Claims 2, 3, 8, and 13 have been amended. Claims 1, 8, and 13 are independent claims. The Examiner is respectfully requested to reconsider the outstanding rejections in view of the above amendments and following remarks.

Double Patenting Rejections

Rejection Based on Tsuji '805

Claims 1-5 and 7-21 stand rejected under the judicially created doctrine of obviousness-type double patenting over claim 1 of U.S. Patent No. 6,690,805 to Tsuji et al. (hereafter "Tsuji '805").

Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case that the claims in the present application are not patentably distinct over claim 1 in Tsuji '805. This grounds of this rejection essentially consists of the Examiner's broad assertion, "substantially all the claimed steps in [claims 1, 8, and 13] were recited in claim 1 of [Tsuji '805]," followed by a verbatim listing of Applicants' claim 1 (see Office Action at pages 3-4). This does not meet the requirements of an obviousness-type double patenting rejection.

Particularly, MPEP § 804.II.B.1 states that the analysis employed in an obviousness-type double patenting rejection parallels the guidelines for a 35 U.S.C. § 103 rejection. Thus, as indicated in this section of the MPEP, the factual inquiries set forth in *Graham v. John Deere Co.*, 148 USPQ 459 (1966) must be applied for making an obviousness-type double patenting rejection. These factual inquiries include, among others, (1) determining the scope and content of a patent claim relative to the claim at issue and (2) determining the differences between the scope and content of the patent claim and the claim at issue.

Scope and Content of Claim 1 in Tsuji '805

In this rejection, Examiner provides no analysis of the scope and content of the claims in Tsuji '805. Instead, the Examiner merely lists verbatim the elements of Applicants' claim 1, and broadly asserts that these elements are "substantially" recited in claim 1 of Tsuji '805.

To assist the Examiner in analyzing the scope and content of claim 1 in Tsuji '805, a copy of the claim is provided below:

1. An audio signal noise reduction system comprising:
noise detecting means for detecting a noise of an audio signal and outputting a detection signal indicating a start time and an end time of a noise period of the noise;
first filter means for extracting a low frequency component of the audio signal;
low frequency band interpolation means for interpolating the noise period of the low frequency component being extracted;
second filter means for extracting second frequency components different from the low frequency component of the audio signal;
suppressing means for suppressing a level of the noise period of the second frequency components being extracted; and
a signal synthesizing means for synthesizing the low frequency component, whose noise period is interpolated, and the second frequency components, the level of whose noise period is suppressed, to output the audio signal.

Applicants respectfully submit that the claimed invention of Tsuji '805 is a noise rejection circuit, which operates by separating the low frequency component of the audio signal from the intermediate and high frequency components. When noise is detected, the Tsuji '805 invention suppresses the intermediate and high frequency components during the noise period, and polynomial interpolation is performed on the low frequency component of the noise period. The Tsuji '805 invention then synthesizes the noise corrected signal from the polynomial interpolated signal.

Accordingly, Applicants respectfully submit that claim 1 in Tsuji '805 does not substantially recite all the elements of the claims in the present application, as asserted by the Examiner.

Differences Between Scope and Content of Claim 1 in Tsuji '805 and Present Claims

In the rejection, there is no indication as to which elements in claim 1 of Tsuji '805 are being relied upon for the elements recited in Applicants' present claims. As such, there seems to be no analysis as to the differences between the scope and content of claim 1 in Tsuji '805 and the claims presently at issue. Further, Applicants respectfully submit that the Examiner fails to describe how the invention in claim 1 of Tsuji '805 would be modified to come up with the presently claimed invention, or why one of ordinary skill in the art would be motivated to make such modifications to Tsuji '805. Thus, the Examiner has failed to establish a *prima facie* case for this obviousness-type double patenting rejection.

Rejection Should be Withdrawn

Applicants respectfully submit that the obviousness-type double patenting rejection of claims 1-5 and 7-21 based on claim 1 in Tsuji '805 should be withdrawn at least for the reasons discussed above.

Rejection Based on Belt (USP 6,774,934)

Claims 1-5 and 7-21 further stand rejected under the judicially created doctrine of obviousness-type double patenting over U.S. Patent No. 6,774,934 to Belt et al. (hereafter "Belt"). Applicants submit that this rejection is improper. The Belt patent neither has a common inventor, nor a common assignee, with the present application. Thus, a double patenting issue cannot arise between Belt and the present application. Further, the claims in Belt do not appear to be related to the Applicants' present claims. Thus, Applicants feel that the reference to Belt in this rejection might be a result of a typographical error.

Since the double patenting rejection based on Belt is improper, Applicants respectfully requests the Examiner to reconsider and withdraw this rejection.

Rejection Under 35 U.S.C. § 102

Claims 8-11 stand rejected under 35 USC § 102(b) as being anticipated by Japanese Patent Publication No. JP 11-186924 to Tsuji et al. (hereafter "Tsuji '924"). This rejection, insofar as it pertains to the presently pending claims, is respectfully traversed.

In the rejection, the Examiner relies on element 20 (Fig. 10) of Tsuji '924 for the claimed noise detector. In Tsuji '924, element 20 processes signals corresponding to a single channel, i.e., Lch. On the other hand, independent claim 8 has been amended to more clearly recite that the claimed noise detector processes a demodulation signal having audio information for a plurality of channels, in order to detect noise.

Thus, Applicants respectfully submit that claim 8 is allowable over Tsuji '924 at least for the reason set forth above. Further, Applicants submit that claims 10 and 11 are allowable at least by virtue of their dependency on claim 8. Thus, reconsideration and withdrawal of this rejection is respectfully requested.

Rejections Under 35 U.S.C. § 103

Tsuji '924/Tanaka

Claims 1-3, 5, 7, and 12-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsuji '924 in view of U.S. Patent No. 5,715,351 to Tanaka (hereafter "Tanaka"). This rejection is respectfully traversed.

Claim 1

As to independent claim 1, the Examiner states, "Tsuji does not clearly teach a selector selecting either one of said first or said second correctors according to the output of said high band level detector" (Office Action at Page 7). However, the Examiner relies on Tanaka to teach the claimed selector (see *Id.*). The Examiner further asserts that it would have been obvious to combine

the teachings of Tsuji and Tanaka "to provide a first and second switch means for switching an input signal and an output signal in response to the high bank [*sic*] detection signal to improve the output sound" (*Id.*).

Applicants respectfully submit that the Examiner's proposed combination of Tsuji '924 and Tanaka is improper for various reasons.

First, Appellant respectfully submits that the Tanaka is not analogous art according to MPEP § 2141.01(a), which states the following:

> The Examiner must determine what is 'analogous prior art' for the purpose of analyzing the obviousness of the subject matter at issue. In order to rely on a reference as a basis for rejection of an Applicant's invention, the reference must either be in the field of Applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. *In re Oetiker*, 977 F.2d 1443, 24 USPQ 2d 1443, 1445 (Fed. Cir. 1992).

It is respectfully submitted that the Tanaka is not directed to analogous art. Tanaka discloses circuits for processing the luminance and chrominance components of a video signal. As such, Tanaka is only concerned with processing visual or display signals, rather than audio signals. As such, Tanaka is not in the field of endeavor of the present application, nor reasonably pertinent to the problem with which the inventors were concerned (i.e., reducing noise in an audio signal).

For similar reasons, Tanaka cannot be considered analogous art with respect to Tsuji '924. Applicants respectfully submit that the non-analogous nature of these references is evidence that one of ordinary skill in the art would not have been motivated to combine the teachings of Tsuji '924 and Tanaka, as asserted by the Examiner.

Furthermore, the Examiner has failed to provide a proper motivation for making the proposed modification of Tsuji '924 in view of Tanaka. The Examiner merely makes a broad assertion that implementing first and second switch means in Tsuji '924 would "improve sound." Applicants respectfully submit that the Examiner fails to provide any reasoning as to why the

implementation of first and second switch means would improve sound in Tsuji '924. The Examiner has failed to set forth any principle, known to one of ordinary skill in the art, or other objective evidence supporting the Examiner's assertion that the proposed modification would "improve sound" in Tsuji '805. Thus, the Examiner has failed to satisfy the requirements of § 103, as discussed in, e.g., *In re Lee*, 47 USPQ2d 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002)

In fact, Applicants submit that the Examiner does not adequately explain how Tsuji '924 would be modified to include such switch means. For example, the Examiner does not specify where to insert the switch means in the Tsuji '924 circuit.

At least for the reasons set forth above, Applicants respectfully submit that the Examiner has failed to provide a proper motivation for modifying Tsuji '924 in view of Tanaka. As such, the Examiner has failed to establish a *prima facie* case of obviousness against independent claim 1. Accordingly, claim 1 is in condition for allowance, and claims 2, 3, 5, 7, and 12 are allowable at least by virtue of their dependency on claim 1.

Claim 13

As to independent claim 13, Applicants respectfully submit that the proposed combination of Tsuji '924 and Tanaka is improper for reasons similar to those discussed above in connection with claim 1.

Furthermore, as amended, claim 13 now more clearly recites applying different configurations to the correction signal depending on whether the high band component level satisfies a first or second criteria. Applicants respectfully submit that the cited references do not disclose, nor does the Examiner assert that the cited references disclose, this feature.

At least for these reasons, Applicants submit that claim 13 is in condition for allowance, and claims 14-18 are allowable at least by virtue of their dependency on claim 13.

Rejection Should be Withdrawn

In view of the above discussion, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Tsuji '924/Tanaka/Nakamura

Claims 4, 5, 19, and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsuji '924 in view of Tanaka, and further in view of European Patent Publication No. EP 477460 to Nakamura et al. (hereafter "Nakamura"). For reasons discussed above in connection with claims 1 and 13, Applicants respectfully submit that the Examiner's proposed combination of Tsuji '924 and Tanaka is improper. Further, Applicants submit that Nakamura does not provide any teaching that remedies the above-mentioned deficiencies of Tsuji '924 and Tanaka set forth above in connection with claims 1 and 13. Accordingly, it is respectfully submitted that claims 4, 5, 19, and 20 are allowable at least by virtue of their dependency on claims 1 and 13. Thus, reconsideration and withdrawal of this rejection is respectfully requested.

Tsuji '924/Tanaka/Nakamura/Matsumoto

Claim 21 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsuji '924 in view of Tanaka and Nakamura, and further in view of U.S. Patent No. 5,630,217 to Matsumoto (hereafter "Matsumoto"). Applicants respectfully submit that the Examiner's proposed combination of Tsuji '924 and Tanaka is deficient at least for the reasons set forth above in connection with claim 13. Further, Applicants submit that Matsumoto does not remedy these deficiencies. Accordingly, claim 21 is allowable at least by virtue of its dependency on claim 13. Thus, the Examiner is respectfully requested to reconsider and withdraw this rejection.

Conclusion

In view of the above amendments and remarks, the Examiner is respectfully requested to reconsider the outstanding rejections and issue a Notice of Allowance in the present application.

However, should the Examiner believe that any outstanding matters remain in the present application, the Examiner is respectfully requested to contact Jason W. Rhodes (Reg. No. 47,305) at the telephone number of the undersigned to discuss the present application in an effort to expedite prosecution.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: October 13, 2006

Respectfully submitted,

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